

REMARKS

The Office Action dated June 25, 2010, has been received and carefully considered. In this Reply, claim 43 is amended without disclaimer and without prejudice. Applicants respectfully submit that the amendments present the claims in better form for allowance. Applicants further submit that the amendments do not add new material, and support for the amendments may be found in the specification and drawings as originally filed. Applicants reserve the right to pursue the inventions of the originally filed and previously pending claims later during the prosecution of this application or during a subsequently filed application. Reconsideration of the outstanding rejections in the Office Action is respectfully requested in view of the following remarks.

Anticipation Rejections

A. Applicants respectfully traverse the rejection under 35 U.S.C. § 102(a and e) of claims 23 to 28, 31 to 34, and 40 to 42 as being anticipated by EP 1271666 (“Onabe”). Applicants respectfully submit that the European patent publication cannot qualify as a reference under 35 U.S.C. § 102(e), as it is not an international application filed under the treaty defined in 35 U.S.C. § 351(a). Accordingly, Applicants will address the rejection as being only under 35 U.S.C. § 102(a).

Claim 23 is drawn to superconductive article including a superconducting layer. The superconductive layer comprises a plurality of individually identifiable superconductive films that are atomically bonded to each other.

Onabe discloses a superconducting conductor that includes a first oxide superconductor layer 22a, a second oxide superconductor layer 22b, and a third oxide superconductor layer 22c, as illustrated in FIG. 4A. The first oxide superconductor layer 22a is formed to have a higher Cu content than the other oxide superconductor layers 22b and 22c. Onabe at Paragraph [0084]. Clearly, Onabe does not disclose superconductive films that are atomically bonded directly to each other. Because the layers may be deposited as discrete layers, wherein each discrete layer directly contacts an immediately adjacent layer, the Office Action has failed to establish that atomic bonding would be inherent with Onabe. Therefore, Onabe does not teach all of the features of claim 23.

Accordingly, Applicants respectfully submit that Onabe does not anticipate claim 23. Claims 24 to 28, 31 to 34, and 40 to 42 depend directly or indirectly from claim 23 and are likewise not anticipated by Onabe at least for the reasons as discussed with respect to claim 1. Therefore, Applicants respectfully request withdrawal of the rejections of claims 23 to 28, 31 to 34, and 40 to 42 in view of Onabe.

B. Applicants respectfully traverse the rejection under 35 U.S.C. § 102(e) of claims 23 to 25, 27 to 34, and 38 to 43 as being anticipated by US 6669774 (“Zhang”).

Each of claims 23 and 43 is drawn to superconductive article including a superconducting layer. The superconductive layer comprises a plurality of individually identifiable superconductive films that are atomically bonded to each other.

Zhang discloses multi-layer articles having three layers of material (i.e., one intermediate layer). The intermediate layer can be formed of a buffer layer material or a superconductor material. In FIG. 3 of Zhang, a multi-layer superconductor article 30 includes layers 12, 14 and 16. Article 30 further includes an additional intermediate layers 18 and 22 having surfaces 19 and 23, respectively. Layers 18 and 22 are disposed between layers 16 and 14. Each of layers 16, 18 and 22 can be formed of a buffer layer material or a superconductor material. Zhang teaches that the intermediate layers are deposited using electron beam evaporation or magnetron sputtering). One of ordinary skill in the art would have understood that evaporation and sputtering are specific types of physical vapor depositions. Similar to other references cited in prior office actions, Zhang does not disclose superconductive films that are atomically bonded directly to each other. Because the layers may be deposited as discrete layers where intermediate layers are deposited using physical vapor deposition techniques, the Office Action has failed to establish that atomic bonding would be inherent with Zhang. Thus, Zhang does not teach all of the features of claim 23 or 43.

Accordingly, Applicants respectfully submit that Zhang does not anticipate claim 23 or 43. Claims 23 to 25, 27 to 34, and 38 to 42 depend directly or indirectly from claim 23 and are likewise not anticipated by Zhang at least for the reasons as discussed with respect to claim 23. Therefore, Applicants respectfully request withdrawal of the rejections of claims 23 to 25, 27 to 34, and 38 to 43 in view of Zhang.

Obviousness Rejections

Claim 26 stands rejected under U.S.C. § 103(a) as being obvious over Zhang in view of Onabe. Claim 26 depends indirectly from claim 23 and is allowable at least for the reasons discussed with respect to claim 23. Therefore, Applicants respectfully request withdrawal of the obviousness rejection of claim 26.

Claim 37 stands rejected under U.S.C. § 103(a) as being obvious over Zhang in view of JP 2003-36744 and in view of Onabe in view of JP 2003-36744. Claim 37 depends from claim 23 and is allowable at least for the reasons discussed with respect to claim 23. Therefore, Applicants respectfully request withdrawal of the obviousness rejection of claim 37.

Conclusion

Applicants respectfully submit that the Present Application is in condition for allowance, and an early indication of the same is courteously solicited. The Examiner is respectfully requested to contact the undersigned by telephone at the below listed telephone number in order to expedite resolution of any issues and to expedite passage of the present application to issue, if any comments, questions, or suggestions arise in connection with the Present Application.

Applicants believe no additional fees are due with this paper, but if the Commissioner believes additional fees are due, the Commissioner is hereby authorized to charge any fees, which may be required, or credit any overpayment, to Deposit Account Number 50-5475.

Respectfully submitted,

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/George R. Meyer/

Date

George R. Meyer, Reg. No. 35,284
ABEL LAW GROUP, LLP
7300 FM 2222
Building 1, Suite 210
Austin, Texas 78730
(512) 900-8500 (phone)